

CLAIMS

1. A data copy device for directly copying data from a source medium (140) to a target medium (150) connected in common to an IDE interface, comprising:

5 an IDE module (130) for providing the IDE interface such that a data bus (D[15:0]) and an address bus (AD[2:0], CS[1:0]) are connected in common to the source medium and the target medium, and a data input/output signal combination (DIOR, DIOW) is connected to a data read/write signal combination (rd_1, wr_1) for the target medium;

10 a switch module (310) for selectively providing an IDE read control signal (DIOR) or an IDE write control signal (DIOW) of the IDE interface as a data read signal (rd_0) for the source medium in response to an external selection input (sel); and

15 a control module (110) which controls the switch module through the external selection input (sel) so that the signal combination (DIOR, DIOW) can be provided as a data read/write signal combination (rd_0, wr_0) for the source medium, sets operational parameters for the source medium and the target medium through the IDE interface such that a Command register of the source medium and a Command register of the target medium are set to READ-mode and WRITE-mode, respectively, confirms whether the source medium and the target medium are in READY states, sets the address bus to 20 DATA-mode, controls the switch module so that the IDE write control signal (DIOW) can be provided as a data read signal (rd_0) for the source medium, and provides the IDE write control signal (DIOW) to initiate data copy from the source medium (140) to the target medium (150).

25 2. The device as claimed in claim 1, wherein the switch module (310) selectively provides a signal combination (DIOR, DIOW) or (DIOW, DIOR) of the IDE interface as the data read/write signal combination (rd_0, wr_0) for the source medium (140).

30 3. A data copy device for directly copying data from a source medium (140) to a target medium (150) connected in common to an IDE interface, comprising:

an IDE module (130) for providing the IDE interface such that a data bus (D[15:0]) and an address bus (AD[2:0], CS[1:0]) are connected in common to the source medium and the target medium, and a data input/output signal combination (DIOR, DIOW) is connected to a data read/write signal combination (rd_0, wr_0) for the target
5 medium;

a switch module (320) for selectively providing an IDE read control signal (DIOR) or an IDE write control signal (DIOW) of the IDE interface as a data write signal (wr_1) for the target medium in response to an external selection input (sel); and

a control module (110) which controls the switch module through the external
10 selection input (sel) so that the signal combination (DIOR, DIOW) can be provided as a data read/write signal combination (rd_1, wr_1) for the target medium, sets operational parameters for the source medium and the target medium through the IDE interface such that a Command register of the source medium and a Command register of the target medium are set to READ-mode and WRITE-mode, respectively, confirms whether the
15 source medium and the target medium are in READY states, sets the address bus to DATA-mode, controls the switch module so that the IDE read control signal (DIOR) can be provided as a data write signal (wr_1) for the target medium, and provides the IDE read control signal (DIOR) to initiate data copy from the source medium (140) to the target medium (150).

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4. The device as claimed in claim 3, wherein the switch module (320) selectively provides a signal combination (DIOR, DIOW) or (DIOW, DIOR) of the IDE interface as the data read/write signal combination (rd_1, wr_1) for the target medium (150).

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5. The device as claimed in any one of claims 1 to 4, wherein some or all of the IDE module (130), the switch module (310; 320), and the control module (110) are provided in the form of a one-chip.

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6. The device as claimed in any one of claims 1 to 4, wherein the control module (110) sequentially sets operational parameters for the source medium (140) and the target

medium (150) through the IDE interface, a medium (140 or 150) that is first set being defined as an ante-set medium and a medium (150 or 140) that is set later being defined as a post-set medium, and the control module performs control such that a chip select input for the ante-set medium is in inactive mode while setting the operational parameters for the 5 post-set medium after setting the operational parameters for the ante-set medium.

7. The device as claimed in any one of claims 1 to 4, wherein the control module (110) sequentially sets operational parameters for the source medium (140) and the target medium (150) through the IDE interface, a medium (140 or 150) that is first set being defined as an ante-set medium and a medium (150 or 140) that is set later being defined as a post-set medium, and the control module performs control such that the data input/out signals (DIOR, DIOW) for the ante-set medium are disabled while setting the operational parameters for the post-set medium after setting the operational parameters for the ante-set medium. 10